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Report of the Scientific and Technical Subcommittee on its thirty-seventh session

Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III): plan of action proposed by the Office for Outer Space Affairs

Note by the Secretariat

I. Introduction

1. Space science and technology can make significant contributions to promoting sustainable development and sustained economic growth. The Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III),[1] held in Vienna from 19 to 30 July 1999, identified many areas where space science and technology could contribute to solving problems of regional or global significance, such as protection of the environment, management of natural resources and disaster management, as well as the establishment and strengthening of communications and information infrastructure, in particular in rural and remote areas. The resolution entitled "The Space Millennium: Vienna Declaration on Space and Human Development",[2] which was adopted by UNISPACE III, contains the nucleus of a strategy to address global challenges in the future through action in the following areas: (a) protecting the Earth's environment and managing its resources; (b) using space applications for human security, development and welfare; (c) advancing scientific knowledge of space and protecting the space environment; (d) enhancing education and training opportunities and ensuring public awareness of the importance of space activities; and (e) strengthening and repositioning of space activities in the United Nations system.

2. In his report entitled "We the peoples: the role of the United Nations in the twenty-first century",[3] the Secretary-General proposed new initiatives to be undertaken for the twenty-first century for consideration by heads of State at the Millennium Summit, to be held from

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6 to 8 September 2000. Turning the strategy contained in the Vienna Declaration into concrete action will yield tangible results in increasing the benefits of space science and technology and its applications for the betterment of humanity and will contribute to implementing some of the key proposals contained in the Secretary-General's report, such as the establishment of a Health InterNetwork, a disaster response initiative and the Millennium Ecosystem Assessment.

3. In its resolution 54/68 of 6 December 1999, the General Assembly endorsed the Vienna Declaration and urged Governments, organs, organizations and programmes of the United Nations system as well as intergovernmental and non-governmental organizations and industries conducting space-related activities to take the necessary action for the effective implementation of the Vienna Declaration; called upon all concerned to implement the recommendations made by UNISPACE III; and requested the Secretary-General to recommend measures to ensure that the Office for Outer Space Affairs was provided with adequate resources to implement the actions listed in paragraph 11 of the resolution based on the recommendations of UNISPACE III.

II. Scope and purpose of the plan of action

4. As the body responsible for implementing the programme on the peaceful uses of outer space, the Office for Outer Space Affairs is committed to assisting Member States as well as space-related intergovernmental and non-governmental organizations in their efforts to translate into reality the possibilities and expectations expressed at UNISPACE III. It is in that spirit that the Office has prepared the plan of action to implement the recommendations of UNISPACE III contained in the present document. In carrying out its activities relating to tele-health, disaster management and management of environment and natural resources, the Office will work towards increasing synergy with efforts made by other bodies and organizations of the United Nations system taking initiatives in the twenty-first century as a result of the Millennium Summit.

5. In its plan of action, the Office is proposing initiatives that would strengthen the role of the Committee on the Peaceful Uses of Outer Space and its subcommittees in the formulation of policy and the implementation of international cooperation in space activities. In addition to strengthening the capacity-building activities of the United Nations Programme on Space Applications, which focuses on the use of space science and technology, the Office is proposing to initiate activities, pursuant to the recommendations made in the Vienna Declaration, to support the Committee's efforts in the development of space law.

6. The Office is also proposing ways to increase synergy among the following three major components of the United Nations Programme on Space Applications:[4] (a) organization of workshops, seminars and training courses; (b) technical assistance and advisory services; and (c) administration of the long-term fellowship programme. All the activities of the Programme are considered important elements in the effort to achieve concrete objectives in priority thematic areas and, to the extent practicable, would be carried out jointly with space-related national, intergovernmental and non-governmental organizations and the private sector.

7. In order to support the work of the Committee and, in particular, its Scientific and Technical Subcommittee, the Office is proposing activities to promote the use of space science and technology within the United Nations system and to enhance further coordination among organizations of the United Nations system in space-related activities.

8. Also as part of its support of the work of the Committee, the Office is proposing to take new initiatives, in particular to increase the awareness of the general public and young people of the benefits of space activities and to encourage space-related industry and non-governmental organizations to play a larger role in United Nations efforts to promote the peaceful uses of outer space.

9. Some actions recommended by UNISPACE III have been part of the work programme of the Office and have been included in the programme budget for the biennium 2000-2001,[5] as approved by the General Assembly in its resolutions 54/249 and 54/250 of 23 December 1999. With respect to actions that have not been included in the programme budget for the biennium 2000-2001, the Office is recommending, in response to the request contained in paragraph 11 of Assembly resolution 54/68, the measures described in section III below.

III. Measures to implement the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space

A. Strengthening the role of the Committee on the Peaceful Uses of Outer Space and its subcommittees in promoting international cooperation in the use of outer space

10. In the Vienna Declaration, the States participating in UNISPACE III recognized the role played by the Committee on the Peaceful Uses of Outer Space in the formulation of policy and the implementation of international cooperation in the field of space and called for action to reaffirm the role of the Committee in leading global efforts in the exploration and peaceful use of outer space relating to significant global issues. In order to assist the Committee and its subsidiary bodies in strengthening their role in that regard, the Office proposes to carry out the following activities:

(a) A biannual global survey of existing mechanisms for international cooperation in space activities (2001);[6]

(b) Creation and maintenance of a web site on the home page of the Office in order to disseminate the results of the survey of existing mechanisms for international cooperation in space activities (2001);

(c) An analytical study to identify areas of space-related activities where new and innovative mechanisms for cooperation are required (2001);[6]

(d) Creation of a database on national space policies (2001);[6]

(e) Organization of a round table of legislators who are advocates of space activities to discuss common goals to be pursued in space endeavours and to exchange views on the role of the Committee (2001);

(f) Organization of a colloquium on the human dimension in space science and technology applications during the forty-fourth session of the Committee (2001).

B. Initiating a capacity-building programme in areas relating to space law

11. The Vienna Declaration called for action to promote the efforts of the Committee in the development of space law by inviting States to ratify or accede to international instruments in this area and by considering the further development of space law to meet the needs of the international community. UNISPACE III also recognized the need to strengthen the role of the Committee and its Legal Subcommittee as mechanisms for the formulation of necessary and appropriate principles and rules regulating outer space in order to meet the requirements of a rapidly advancing field of human activity. The Office proposes to carry out the following activities:

(a) To enhance the understanding of Member States of the international legal instruments governing space activities and of the legal implications of emerging space science and technology applications and commercialization of space activities;

(b) To increase the availability of information and documents relating to space law for dissemination to Member States, international organizations and the general public:

(i) Organization of a workshop on legal aspects of space activities (2001);[6]

(ii) Expanded research on the national and international regulations affecting space-related activities (2001);

(iii) Development, maintenance and improvement of a database on national space laws (2001).[6]

C. Strengthening the activities of the United Nations Programme on Space Applications

12. In its resolution 54/68, the General Assembly called for strengthening the activities of the United Nations Programme on Space Applications and listed a number of activities to be included in the Programme.

1. Organization of workshops, seminars, symposia and training courses

13. UNISPACE III identified several topics for workshops and training courses to be organized, such as the use of satellite communications and Earth observation

data for disaster management and search and rescue operations, tele-education and tele-health, satellite communications, basic space science, monitoring of the environment and modelling change, remote sensing for educators and management of natural resources. In addition to organizing workshops and training courses on those topics for decision makers and experts from developing countries, the Office proposes to carry out the following activity, pursuant to the Vienna Declaration: development and implementation of a training module, in particular for developing countries, to make effective use of satellite communications for distance education, to promote literacy and to reduce information gaps (2000-2001).

14. In order to initiate follow-up pilot projects using space applications for promoting sustainable development in the home countries or regions of the participants of workshops and training courses organized by the Programme, the Office proposes to carry out the following activity, pursuant to the recommendations of UNISPACE III: implementation of a new programme to promote the successful use of knowledge acquired at training courses by university educators in the education curricula at their universities by providing grants to support ongoing pilot projects and practical demonstration exercises (Technology Outreach Programme (TOPS)) (4 grants in 2001).

2. Technical assistance and advisory services

15. In order to provide support to the regional centres for space science and technology education affiliated with the United Nations, including the Network of Space Science and Technology Education and Research Institutions for Central Eastern and South-Eastern Europe, in particular to support their operational activities, the Office proposes to carry out the following activities, pursuant to the recommendations made by UNISPACE III:

(a) Provision of technical assistance and advice to the regional centres for space science and technology education and the Network, in the following (2000-2001):

(i) Planning and implementing training activities;

(ii) Promoting the establishment of cooperative agreements between the centres and the Network and donor countries, international organizations and private industry;

(iii) Promoting the acquisition by the centres and the Network of audio, visual and available on-line educational materials;

(iv) Achieving a significant representation of regional and international lecturers;

(v) Directing some of the activities of the centres and the Network to areas of regional and international concern;

(vi) Preparing cost-sharing proposals to funding institutions for initial operations;

(vii) Establishing contacts with industry that would lead to partnerships in areas of common interest;

(viii) Designing an effective means of disseminating information about the accomplishments of the centres and the Network;

(ix) Utilizing educational materials and training possibilities available through the Internet, as well as in exchanging materials and programme experiences among themselves;

(b) Preparation of a three-year work plan to support the education programmes of the centres and the Network and to strengthen their infrastructure and operation (2001);

(c) Provision of nominal financial assistance to the centres and the Network for their operation (5 centres and the Network, 2001).

16. In order to initiate a programme to promote the use of satellite communications and Earth observation data for disaster management by user institutions in developing countries, the Office proposes to carry out the following activities, pursuant to resolution 54/68 and the recommendations of UNISPACE III:

(a) Development of the first of a series of modules for integrating space technology in disaster-specific management (e.g. floods, forest fires and landslides), consisting of technical, administrative and policy requirements and a step-by-step procedure to incorporate space technology into disaster management in a functional manner, including training required for officials and staff of civil protection authorities (2001);

(b) Development of plans and proposals to implement pilot projects in developing countries to use space technology in disaster management (2001).[7]

17. In order to develop a programme to promote the use of Earth observation data in the areas of natural resource management and environmental monitoring by user institutions in developing countries, the Office proposes to carry

out the following activities, pursuant to resolution 54/68 and the recommendations of UNISPACE III:

(a) Surveys to identify ongoing national and regional development projects that could benefit from the use of optical, infra-red or radar data and a needs assessment study to identify the type and coverage of satellite images required by the identified user institutions in developing countries (2001);

(b). Establishment and distribution of a comprehensive list of distributors of data from Earth observation satellites, as well as of analysed information, including the models used (2001);

(c). Provision of satellite data and hardware/software to user institutes to initiate pilot projects or strengthen ongoing pilot projects to use Earth observation data (2 projects in 2001).

18. In order to strengthen technical advisory services in astronomy and the planetary sciences, the Office proposes to carry out the following activities, pursuant to resolution 54/68, the Vienna Declaration and the recommendations of UNISPACE III:

(a) Coordination of the establishment of a network to provide access to information on national and international activities relating to basic space science (2001);

(b) Facilitating the participation of scientists and engineers from developing countries in major space-related international projects and programmes (2001);

(c) Coordination of the distribution of educational materials relating to basic space science (2001);

(d) Promotion of greater involvement of scientists and observatories with the capability to observe the skies of the southern hemisphere for near-Earth objects (2001);

(e) Organization of an expert meeting on near-Earth objects every 2 to 3 years (2001);

(f) Ensuring the involvement of developing countries in the research and observation of near-Earth objects through the expansion of the small telescope network (2001);

(g) Development of programmes of information and training for the benefit of developing countries in order:

(i) To assist scientists in responding to opportunities to participate in space missions (2000-2001);

(ii) To benefit educators and others interested in the broader issues related to space science and planetary exploration (2000-2001).

19. UNISPACE III stressed the social and economic benefits of the satellite navigation and positioning systems and the Vienna Declaration called for action to improve the efficiency and security of transport, search and rescue, geodesy and other activities by promoting the enhancement of, universal access to and compatibility of space-based navigation and positioning systems. In order to increase the capacity of Member States, in particular developing countries, to benefit from global positioning and navigation systems by incorporating their use into research and operational activities, the Office proposes to carry out the following activity: development and implementation of a training module, consisting of workshops or seminars, possibly to be followed by pilot projects, focusing on capacity-building in the use of global positioning and navigation systems in various areas of application (2001).[6]

3. Long-term fellowships

20. In order to support the initiatives taken by the participants of the long-term fellowship programmes after successfully completing their training and returning to their home countries, the Office proposes to carry out the following activity, pursuant to resolution 54/68: implementation of pilot projects by providing grants to selected participants of the long-term fellowship programmes (5 grants in 2001).

D. Promoting the use of space technologies within the United Nations system

21. The Vienna Declaration called for action to encourage the increased use of space-related systems and services by the specialized agencies and programmes of the United Nations system and to strengthen the coordination of mutually beneficial activities between the Committee on the Peaceful Uses of Outer Space and other United Nations entities. In that connection, the Office proposes to carry out the following activities, pursuant to the recommendations of UNISPACE III and in order to facilitate the work of the Scientific and Technical Subcommittee in its consideration of the item entitled "Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within the United Nations system and among United Nations specialized agencies and bodies":

(a) Enhancement of the coordination and cooperation among the Inter-Agency Meeting on Outer Space Activities, the Committee on the Peaceful Uses of Outer Space and its subcommittees, the Commission on Sustainable Development, the Administrative Coordination Committee and its machinery and the Committee on Earth Observation Satellites (CEOS) on issues relating to global warming, climate change, human health problems and sustainable development by preparing information notes on the work of the Inter-Agency Meeting on Outer Space Activities and the Committee on the Peaceful Uses of Outer Space and studies, as required, to contribute to the work of the Commission on Sustainable Development, the Administrative Coordination Committee and CEOS (2000-2001);

(b) Survey and analysis of the status of the use of space science and technology and its applications within the United Nations system to identify those organizations which have not yet benefited from space applications (2001);

(c) Preparation of proposals for consideration by those organizations to incorporate space applications into their activities to increase efficiency and effectiveness (2001).

22. In addition, in order to maximize the benefits of advanced information technologies in enhancing inter-agency cooperation in space-related activities, the Office proposes to carry out the following activities:

(a) Investigation of the usefulness of emerging information technologies for the work of the Inter-Agency Meeting on Outer Space Activities and development of strategies to expand the use of selected advanced information technologies within the United Nations system to facilitate the work of the Inter-Agency Meeting (2001);

(b) Enrichment of the programme content of the inter-agency web site to include the most up-to-date scientific and technical aerospace information and the administration of the inter-agency web site on a regular basis (2001);

(c) Development of strategies to increase the number of users of the inter-agency web site (2001).

E. Establishing and strengthening the partnership with industry

23. The Vienna Declaration called for action to encourage the increased use of space-related systems and services by the private sector around the world in order to support United Nations efforts to promote the exploration and peaceful uses of outer space. In its resolution 54/68, the General Assembly called for the organization of a one-day symposium to strengthen the partnership of the Scientific and Technical Subcommittee with industry; and identified a number of actions to strengthen the United Nations Programme on Space Applications, including the promotion of cooperation in space applications projects between government establishments, universities and research institutions and private industry. Pursuant to those requests, the Office proposes to carry out the following activities:

(a) Preparation of plans of the Office and proposals for pilot projects that may be funded by space-related companies for the benefit of developing countries (1 or 2 proposals in 2001);

(b) Preparation of a booklet compiling project proposals by research institutes and government agencies of developing countries for distribution to space-related industry, international funding institutions and donor agencies (1 booklet in 2001);

(c) Presentation of proposals at meetings of space-related industry (2001);

(d) Organization of an industry symposium during the annual session of the Scientific and Technical Subcommittee (2001);[6]

(e) Presentation of the plans and proposals of the Office at meetings of space-related industry (1 or 2 meetings per annum);

(f) Inclusion of industry representatives as lecturers and participants in the workshops and seminars of the United Nations Programme on Space Applications (2000-2001).

F. Strengthening the partnership with intergovernmental and non-governmental organizations

24. In its resolution 54/68, the General Assembly urged intergovernmental and non-governmental organizations and industries conducting space-related activities to take the necessary action for the effective implementation of the Vienna Declaration. The Vienna Declaration called for action to encourage all States and international organizations to strengthen their efforts in promoting the peaceful uses of outer space for the benefit and in the interest of all States by involving civil society. In this connection, the Office proposes to carry out the following activities to coordinate with non-governmental entities and support their implementation of the recommendations of UNISPACE III:

(a) Presentation of plans and proposals of the Office at meetings of non-governmental entities to discuss their implementation of the recommendations of UNISPACE III and to ensure that the work of non-governmental entities in that regard is in line with and complements the work of the Committee on the Peaceful Uses of Outer Space (2001);

(b) Provision of support to international non-governmental, non-profit organizations to carry out their pilot projects to implement the recommendations of UNISPACE III (1 or 2 projects in 2001);[6]

(c) Provision of support to an initiative being undertaken under the auspices of the International Astronautical Federation to engage non-governmental entities in the implementation of selected recommendations resulting from UNISPACE III (2000-2001).

G. Initiating a public outreach programme and a programme for young people

25. In its resolution 54/68, the General Assembly called for action to strengthen the United Nations Programme on Space Applications by, among other things, carrying out activities for the general public and young people to provide opportunities, to learn about space activities and their socio-economic benefits. The Vienna Declaration called for action to increase awareness among the general public of the importance of peaceful space activities for improving the common economic and social welfare of humanity and for action to provide children and youth with opportunities to learn more about space science and technology and their importance to human development and to participate fully in activities related to space science and technology. In this connection, the Office proposes to carry out the following activities, on the basis of the recommendations of UNISPACE III and bearing in mind that World Space Week, to be celebrated each year in accordance with resolution 54/68, would provide opportunities to increase public awareness of the contributions of space science and technology to the betterment of the human condition:

(a) Organization of an annual public forum, in cooperation with the Association of Space Explorers and other interested intergovernmental and non-governmental organizations, to inform the general public of past, ongoing and planned space activities and the future direction of such activities (1 in 2001);

(b) Implementation of a programme of visits by astronauts, cosmonauts and space scientists in cooperation with the Association of Space Explorers and other interested entities (1 in 2001);

(c) Assistance in organizing special events at Headquarters and/or in Vienna during World Space Week (2000-2001);

(d) Coordination of activities to be carried out around the world during World Space Week, including the preparation of reports to the Committee on the Peaceful Uses of Outer Space on the results of its activities, as appropriate, and assistance to the media and press to cover events during World Space Week (2001);

(e) Implementation of a programme, in cooperation with interested Member States, intergovernmental and non-governmental organizations and private corporations, such as SPACEHAB, to provide opportunities for students of primary and secondary schools, in particular those in developing countries, to participate in ongoing human space flight activities (2001);

(f) Organization of a workshop for young professionals and students on various scientific and technological, legal and policy issues relating to space activities (2001).

H. Strengthening publication and information services

26. In order to support the initiative described in paragraph 25 above, which is to increase the awareness of the general public, in particular young people, of the contributions of space science and technology to the betterment of the human condition, as well as of the efforts being made by the Committee on the Peaceful Uses of Outer Space and its subsidiary bodies in promoting the

peaceful uses of outer space, the Office proposes to strengthen its public and information services through the following activities:

(a) Improvement of the database of information furnished in accordance with the Convention on Registration of Objects Launched into Outer Space (resolution 3235 (XXIX), annex) to make it available on the web site of the Office with an on-line search capability in user-friendly format (2000-2001);

(b) Development and implementation of an interactive multimedia education service for the general public, in particular for students of primary and secondary schools, consisting of the following:

(i) Development of a web page to provide basic information on various subjects relating to space science and technology in simple language and with sound and images (2001);[6]

(ii) Preparation and dissemination of CD-ROMs containing multimedia educational materials on various subjects relating to space science and technology (2001);

(iii) Creation of a public on-line question-and-answer forum, to respond to public inquiries on-line or to refer users to experts in space-related organizations (2001);[6]

(iv) Organization of on-line interview sessions, in collaboration with interested space agencies, to link students, in particular those in developing countries, with astronauts and cosmonauts during scheduled sessions (2 or 3 sessions in 2001).

IV. Conclusion

27. The Office carries out a number of activities, as projected in the programme budget for the biennium 2000-2001, to support the work of the Committee and its subsidiary bodies, to develop the indigenous capability of developing countries in the use of space science and technology within the framework of the United Nations Programme on Space Applications, to promote inter-agency coordination and to disseminate information on the work of the United Nations in the area of space science and technology and on the latest scientific, technological, policy and legal developments in space activities, for the benefit of Member States, international organizations and the general public. However, the activities proposed in the plan of action aimed at strengthening the role of the Committee and its subsidiary bodies, initiating a capacity-building programme in areas relating to space law, strengthening and initiating new activities of the United Nations Programme on Space Applications, promoting the use of space technologies within the United Nations system, establishing and strengthening the partnership with industry and with intergovernmental and non-governmental organizations and initiating a public outreach programme and a programme for young people have not been included in the programme budget for the biennium 2000-2001. The Committee may wish to recommend that the Secretary-General implement the measures and activities proposed above, pursuant to resolution 54/68.

Notes

[1] A/CONF.184/6.

[2] Ibid., chap. I, resolution 1.

[3] United Nations publication, Sales No. E.00.I.16.

[4] The mandate of the Programme consists of the following: (a) promotion of greater exchange of actual experience with specific applications; (b) promotion of greater cooperation in space science and technology between developed and developing countries as well as among developing countries; (c) development of a fellowship programme for in-depth training; (d) organization of seminars on advanced space applications and new system developments; (e) stimulation of the growth of indigenous nuclei and an autonomous technological base; (f) dissemination of information on new and advanced technologies and applications; and (g) provision or arrangements for provision of technical advisory services on space application projects, at the request of Member States or any of the specialized agencies.

[5] See *Official Records of the General Assembly, Fifty-fourth Session, Supplement No. 6* (A/54/6/Rev.1), vol. II, sect. 6.

[6] The activity would be continued into the biennium 2002-2003.

[7] Pilot projects to be developed in 2001 to introduce the use of space technology in disaster management could be implemented in the biennium 2002-2003 in developing countries.